



THE EFFECT OF AUDIO-VISUAL EDUCATION ON MENOPAUSE SYNDROME IN PREMENOPAUSAL WOMEN

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ABSTRACT

These symptoms can disrupt daily activities and even social life. One approach to preparing women for menopause is by changing their cognitive understanding through education. Audio-visual media is an engaging educational tool because it allows the use of images, graphics, and video animations to visualize the processes and changes occurring in the body during menopause. and attitudes. This study demonstrates that health animated video media. This research design uses a quasi-experiment with a pre-test post-test with control group design. A sample of 37 respondents was selected using Purposive Sampling. The independent variable in the study is Audio Visual, and the dependent variable is knowledge. The instrument used was a pre-post test questionnaire to assess the effect of the media provided, followed by statistical tests using the Wilcoxon Signed Rank Test and Mann Whitney U Test. The results showed that audio-visual media could improve knowledge from poor to good (78.9%). The audio-visual media significantly impacted knowledge, with a p-value of 0.000. The study concluded that education through audio-visual media can enhance premenopausal women's knowledge. Women with knowledge about menopause syndrome will better understand and feel more confident in managing issues that arise during these changes.

Keywords : Audio visual, Education, Knowledge

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INTRODUCTION

Menopause occurs when menstruation has ceased for 12 months due to the progressive failure of the ovaries to produce estrogen hormones (Sulistyowati & Susilawati, 2021). Before the menopause phase, women will experience the premenopause phase. Premenopause occurs in women around the age of 40 and is characterized by irregular menstrual cycles, prolonged menstrual bleeding, menstrual pain, and increased blood flow (Hasan, 2020).

The World Health Organization (WHO) projects that by 2025, the number of women experiencing menopause will rise to 107 million, reaching 373 million women in menopause (Atikah & Wulansari, 2023). According to the Population and Civil Registration Data of the Republic of Indonesia, approximately 7.4% of the total population in 2025 will be women undergoing menopause around the age of 48 (Nainggolan, 2023). Statistics from East Java show that residents aged over 45 have entered menopause. In 2020, this was observed in 4,073,730 individuals. In Surabaya, approximately 279,613 individuals experienced menopause in 2020. The most common menopause complaints reported are joint and muscle pain (76.7%), sexual disorders (75.1%), sleep disturbances (72.7%), physical and mental fatigue

(72.2%), urinary problems (64.8%), vaginal dryness (57.8%), vasomotor complaints (51.5%), irritability (30.2%), cardiovascular issues (26.3%), and depression (22.0%) (Putri et al., 2022).

Based on interviews with menopausal women, they reported experiencing several symptoms such as hot flashes, frequent nighttime awakenings, difficulty sleeping, fatigue, irritability, and menstrual disturbances. Some women indicated that they were not aware that these symptoms were signs of menopause and mistakenly believed they were signs of illness.

Menopausal women will experience a variety of symptoms known as menopause syndrome. This syndrome arises due to changes in estrogen levels, which can lead to physical changes such as hot flashes, night sweats, vaginal atrophy, reduced libido, and pain during sexual intercourse. These symptoms can disrupt daily activities and also cause psychological changes such as memory decline, insomnia, depression, fatigue, difficulty in interacting with others due to excessive suspicion, reduced concentration, and an inability to make decisions, all of which can impact social life.

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The outreach program previously conducted by Puskesmas Pucang Sewu included education through lectures and leaflets. However, leaflets have limitations such as being easily lost, damaged, and having a restricted message capacity. In this study, the researcher used audio-visual media for education, as it allows for the use of images, graphics, and video animations to visualize the processes and changes occurring in the body during menopause. This approach can help women understand the changes they are experiencing. Thus, the delivery of information becomes more engaging and easier for the audience to comprehend (Prihantini & Wulandari, 2022). Consequently, it is expected that

knowledge about menopause syndrome among premenopausal women will improve (Hasan, 2020).

The aim of this study is to determine the effect of audio-visual education on knowledge of menopause syndrome among premenopausal women.

METHOD

This study employs a quasi-experimental design with a pre-test post-test with control group design. The research was conducted from October 2023 to May 2024 at Puskesmas Pucang Sewu Surabaya. The population for this study consists of all premenopausal women in the service area of Puskesmas Pucang Sewu, with a sample size of 37 premenopausal women selected using Purposive Sampling based on inclusion and exclusion criteria, calculated using Slovin's formula. The independent variable in the study is audio-visual education, and the dependent variable is knowledge. Data collection was carried out using a questionnaire. Data analysis was performed with SPSS for Windows, including normality tests, Wilcoxon Signed Rank Test, and Mann Whitney U Test.

RESULTS AND DISCUSSIONS

Result

Respondent Characteristics

In this study, there were 37 premenopausal women divided into

two groups: 19 in the experimental group and 18 in the control group. The characteristics of the respondents are presented as follows:

Table 1. Frequency Distribution of Characteristics of Premenopausal Woman responden in Kertajaya Surabaya City was conducted from February to March 2024.

No.	Characteristics	Treatment Group		Control Group	
		f	%	f	%
1.	Age				
	35-44 Year	5	26.3	4	22.2
	45-49 Year	9	47.4	8	44.5
	50-55 Year	5	26.3	6	33.3
	Total	19	100	18	100
2.	Education Level				
	SD	4	21.1	2	11.1
	JHS	5	26.3	6	33.3
	SHS	8	42.1	8	44.5
	Higher Education	2	10.5	2	11.1
	Total	19	100	18	100
3.	Occupation				
	Employed	15	78.9	12	66.7
	Unemployed	4	21.1	6	33.3
	Total	19	100	18	100

Source: Primary Data (2024)

Table 1 shows the frequency distribution of general data in the study on the effect of audio-visual media education on menopause syndrome knowledge among premenopausal women. The results indicate that in the treatment group (audio-visual education), 47.4% of

respondents were aged 45-59 years, 42.1%, had a high school education, and 78.9% were unemployed. In the control group (leaflet education), 44.5% of respondents were aged 45-49 years, 44.5% had a high school education, and 66.7% were unemployed.

Table 2. Knowledge of premenopausal women before and after education about menopause syndrome both the treatment and control groups in Kertajaya, Surabaya, was conducted from February to March 2024.

Knowledge	Treatment Group				Control Group			
	<i>Pr -test</i>		<i>t Post-tes</i>		<i>Pre-test</i>		<i>Post-test</i>	
	f	%	f	%	f	%	f	%
Good	1	5.3	15	78.9	1	5.6	3	100
Fair	8	42.1	3	15.8	7	38.9	13	0
Poor	10	52.6	1	5.3	10	55.5	0	0
Total	19	100	19	100	18	100	16	100

Source: Primary Data (2024)

Table 2 shows that the categorization of knowledge levels among premenopausal women before receiving health education through audio-visual media indicated that 5.3% of women had good knowledge about menopause syndrome. After receiving education through audio-visual media, a follow-up assessment with the same questionnaire revealed an increase in knowledge, with 78.9% of

premenopausal women having good knowledge. In the control group, before receiving education using leaflets, 55.5% of menopausal women had poor knowledge about menopause syndrome. After education, there was an increase in knowledge, with 72.2% of women having adequate knowledge, while 11.1% still had poor knowledge.

Table 3 Wilcoxon Pre-Test and Post-Test Results in the Experimental Group and Control Group on Premenopausal Women's Knowledge

Variable	Treatment Group						Control Group					
	<i>Pre-test</i>			<i>Post-test</i>			<i>Pre-test</i>			<i>Post-test</i>		
	Mean	SD	Mean	SD	Δ	<i>p-value</i>	Mean	SD	Mean	SD	Δ	<i>p-value</i>
Knowledge	55.79	16.182	81.84	13.355	26.05	0.000	55.28	14.087	66.94	13.189	11.66	0.000

Based on Table 3, the results of the Wilcoxon signed-rank test showed a significant p-value of 0.000 ($p < 0.05$) for the treatment group, indicating that audio-visual media is effective in improving the knowledge of premenopausal women. Similarly, the Wilcoxon signed-rank test for the control group also yielded a p-

value of 0.000 ($p < 0.05$). Which means that leaflet media can also enhance knowledge about menopause syndrome. Therefore, it can be concluded that H1 is accepted and H0 is rejected, indicating that education about menopause syndrome through audio-visual media has an impact on the knowledge of premenopausal women.

Table 4 Results of the Wilcoxon Pretest-Posttest Test

Group			N	Mean Rank	Sum of rank	P-value
Knowledge	Post Test	Negatif	0 ^a	0.00	0.00	0.000
	Audio	Ranks				
	Visual-	Positif ranks	18 ^b	9.50	171.00	
	Pre Test	Ties	1 ^c			
	Audio	Total	19			0.000
	Visual					
	Post Test	Negatif	0 ^a	0.00	0.00	
	Leaflet-	Ranks				
	Pre Test	Positif Rank	18 ^b	9.50	171.00	0.000
	Leaflet	Ties	0 ^c			
		Total	18			

Source: Primary Data (2024)

- a. ^a post testintervensi < pre testintervensi
- b. ^b post testintervensi > pre testintervensi
- c. ^c post testintervensi = pre testintervensi

Table 4 shows it can be observed that the knowledge levels from the Pre-Test and Post-Test in the treatment group (audio-visual) show no decrease, as evidenced by the results of negative ranks, mean ranks, and sum of ranks being 0. The positive ranks indicate that 18 respondents experienced an improvement, with a mean rank of 9.50 and a sum of positive ranks totaling 171.00. There is also one tie, meaning one respondent had the same score for both the pre-test and post-test. Similarly, Table 4 shows that in the control group (leaflet), there was no decrease in knowledge from the Pre-Test to the Post-Test, as indicated by the results of negative ranks, mean ranks, and sum of ranks being

0. Positive ranks again show that 18 respondents experienced improvement, with a mean rank of 9.50 and a sum of positive ranks of 171.00. The data analysis in Table 4 reveals that knowledge among respondents increased after receiving education using audio-visual media, as demonstrated by the Wilcoxon test result with a p-value of 0.000, which is less than 0.05. This indicates a significant effect of audio-visual media education on improving knowledge about menopause syndrome among premenopausal women. Similarly, there was an increase in knowledge in the leaflet group, with a p-value of 0.000, indicating a significant effect of leaflet education on the knowledge of menopause syndrome among premenopausal women in RW 5 Kertajaya, within the Puskesmas Pucang Sewu area

Table 5. Results of the Mann-Whitney Posttest Test

Respondent Group	Knowledge		
	Mean	SD	<i>p</i>
Treatment Group	81.84	13.355	0.000
Control Group	66.94	13.189	

Source: Primary Data (2024)

Based on Table 5, there is a significant difference between audio-visual media and leaflets. Knowledge improvement was higher among respondents who used audio-visual media compared to those who used leaflets, as shown by the mean values in Table 5. The Mann-Whitney U Test results showed a *p*-value of 0.000 ($p < 0.05$) for knowledge, indicating a significant difference between the treatment group (audio-visual) and the control group (leaflet) after receiving health education. Therefore, health education on menopause syndrome using audio-visual media is more effective than using leaflets.

DISCUSSIONS

The study found that both audio-visual media and leaflets effectively increased knowledge about menopause syndrome among women. Participants using audio-visual media improved from poor to good levels of knowledge, while the leaflet group improved from poor to moderate knowledge. Demographically, nearly half of the respondents had a high school education, and most were unemployed or homemakers, indicating that education level may influence knowledge acquisition. However, the study also showed that lower

education does not always correlate with lower knowledge, as social interaction opportunities and the type of occupation can influence health information absorption. Knowledge is a key factor influencing behavior. Before adopting new behavior, individuals need to understand its meaning or benefits to themselves or their families (Rianti et al., 2020). Knowledge arises from awareness, which develops when a person perceives an object through their senses—primarily sight and hearing. It represents the understanding or awareness of information gained through direct experience, learning, or study (Meiranda et al., 2023).

Health education is part of health promotion that aims to deliver information to individuals or groups to enhance their health knowledge and improve health outcomes (Indrawati, 2020). According to Mardianti Dessy et al.

(2021), audio-visual media engages both visual and auditory senses. This media combines moving animations, sound, images, graphics, and video to visualize processes and changes occurring in the body, providing more detailed information. Additionally, audio-visual media can be accessed repeatedly, anytime and anywhere,

facilitating the dissemination of comprehensive and easily accessible information (Prihantini & Wulandari, 2022). It also enables the continuous observation of the educational process, offering unique benefits for learning (Salsabila U.H., 2020).

This study aligns with research by Ayu Komang et al. (2021), which showed that audio-visual media effectively improved health knowledge among pre-elderly individuals to implement health protocols. Research by Nurlaelasari Diana et al. (2023) demonstrated that audio-visual media is more effective in increasing knowledge compared to leaflets, as leaflets tend to fold and lack auditory or movement stimulation (Mutia Hayya A. et al., 2022). These findings are consistent with the study by Waluyo Bagus (2021), which reported a significant increase in knowledge among respondents, highlighting that the audio-visual method is more effective in enhancing pre-elderly knowledge about hypertension compared to leaflets, as information received through audio-visual media is captured by the eyes and then processed by the brain (Deviani, 2019).

The increase in respondents' knowledge was linked to the use of media in education. This is in line with the theory that using audio-visual media has a higher level of effectiveness and can be used in health education activities because the information received through audio-visual media is

captured by the eyes and processed in the brain. According to Indrawati's (2020) theory, audio-visual media has proven to be more effective in attracting attention, increasing engagement, and facilitating information reception, while offering flexibility in terms of space and time (Setiawan H., 2021). Conversely, leaflet media, consisting of images and text, may be more difficult for audiences to understand. Therefore, audio-visual media is more effective in enhancing knowledge than leaflets (Eri Kurniasari et al., 2021). According to the researchers, audio-visual media is more impactful than leaflets due to its advantages in presenting information about menopause syndrome in a more comprehensive manner. Audio-visual media uses language, sound, and video, making it easier and more engaging for respondents to understand. This type of media can be stored and accessed repeatedly, allowing respondents to watch it anytime and anywhere, which significantly enhances its effectiveness in improving knowledge about menopause syndrome among premenopausal women. On the other hand, leaflets are considered less effective because they rely solely on text and images, which can vary in their effectiveness depending on each respondent's ability to process information. Additionally, leaflets can lead to boredom due to the passive nature of reading, which might reduce respondents' interest and engagement. Therefore, health education using leaflets may result in lower levels of interest and effectiveness compared to audio-visual media. Based on Table 5, there is a significant

difference between audio-visual media and leaflets. Knowledge improvement was higher among respondents who used audio-visual media compared to those who used leaflets, as shown by the mean values in Table 5. The Mann-Whitney U Test results showed a p-value of 0.000 ($p < 0.05$) for knowledge, indicating a significant difference between the treatment group (audio-visual) and the control group (leaflet) after receiving health education. Therefore, health education on menopause syndrome using audio-visual media is more effective than using leaflets.

CONCLUSION

Based on the research conducted at Puskesmas Pucang Sewu Surabaya and discussed in the previous chapter, the researchers can conclude that education through audio-visual media is effective in enhancing knowledge among premenopausal women. Audio-visual media has proven to be more effective in improving premenopausal women's knowledge compared to leaflet media. For future research, it is recommended to consider increasing the sample size and expanding the population and variables. Additionally, using a more effective educational media as a comparison group could provide further insights and improvements.

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